are required to negotiate in good faith. If no agreement is reached within one year of the date the Coast Guard submitted its plan, the Coast Guard may petition the Commission to select the channel pairs.

(c) (4)

(4) Subject to the requirements of s 80.21, each VPCSA licensee may place stations anywhere within its region without obtaining prior Commission approval provided:

(c) (4) (i)

(i) It provides to co-channel coast station incumbent licensees, and incumbent Private Land Mobile Radio licensees authorized under part 90 of this chapter on a primary basis, protection as defined in subpart P of this part. VPCSA licensees that share a common border may either distribute the available frequencies upon mutual agreement or request that the Commission assign frequencies along the common border.

(c) (4) (ii)

(ii) The locations and/or technical parameters of the transmitters are such that individual coordination of the channel assignment(s) with a foreign administration, under applicable international agreements and rules in this part, is not required.

(c) (4) (iii)

(iii) For any construction or alteration that would exceed the requirements of s 17.7 of this chapter, licensees must notify the appropriate Regional Office of the Federal Aviation Administration (FAA Form 7460-1) and file a request for antenna height clearance and obstruction marking and lighting specifications (FCC Form 854) with the FCC, Attn: Information Processing Branch, 1270 Fairfield Rd., Gettysburg, PA 17325-7245.

(c) (4) (iv)

(iv) The transmitters must not have a significant environmental effect as defined by ss 1.1301 through 1.1319 of this chapter.

(d)

(d) Working frequencies in the Mississippi River System. The Mississippi River System includes the Mississippi River and connecting navigable waters other than the Great Lakes. The following simplex frequencies are available for assignment to public coast stations serving the Mississippi River System for radiotelephony communications. These simplex frequencies also are available for use by authorized ship stations within communication service range, whether or not the ship is operating within the confines of the Mississippi River System.

Mississippi River System Working Frequencies; Carrier Frequencies (kHz)

2086 [FN1]	4065	6209	8201	12362	16543
2782	4089	6212	8213	12365	16546
	4116	6510	8725	----------	----------
	4408	6513	8737	----------	----------

[FN1] Limited to a maximum transmitter output of 150 watts (PEP).

(e)

(e) Canada/U.S.A. channeling arrangement frequencies. The VHF frequencies assignable to ship and coast stations in the State of Washington and their usage limitations pursuant to the Canada/U.S.A. channeling arrangement are described in Subpart B of this Part.

s 80.373 Private communications frequencies.

This section describes the carrier frequencies assignable for ship-to-ship and ship-to-coast private communications.

(a)

(a) Special requirements for private coast stations. Assignment to private coast stations of radiotelephony frequencies in the 2000-27500 kHz band are subject to the following:

(a) (1)

(1) Private coast stations must see J3E emission.

(a) (2)

(2) On 2182 kHz, private coast stations must be capable of receiving J3E ~~and H3E emissions~~.

(a) (3)

(3) Except in the Mississippi River System and Great Lakes, private coast stations serving lakes or rivers are not authorized on the 2000-2850 kHz band.

(a) (4)

(4) Private coast stations may use DSC for calling on their assigned frequencies in the 2000-27500 kHz band and on those frequencies in the 156-162 MHz band which are allocated for maritime control, commercial and non-commercial communications.

(b)

(b) Frequencies in the 2000-27500 kHz band for intership safety and other communications. This paragraph describes the geographic areas of operation and the frequencies and limitations in the band available for assignment for intership safety and operational simplex radiotelephone communications.

(b) (1)

(1) Frequencies available.

Carrier frequency (kHz)	Geographic area
2003.0	Great Lakes only.
2082.5 [FN1], [FN2]	All areas.
2093.0 [FN1]	All areas.
2142.0	Pacific coast areas south of 42 degrees north on a day basis only.
2203.0 0 [FN2]	Gulf of Mexico.
2214.0 [FN1]	All areas.
2638.0 [FN1]	All areas.
2670.0	All areas.
2738.0 [FN1]	All areas except the Great Lakes.
2830.0	Gulf of Mexico only.

FN1 Limited to a peak envelope power of 150 watts.
FN2 Available on a secondary basis for intership communications by ships involved in non-commercial fishing.

(b) (2)

(2) Except for 2093.0 kHz and 2214.0 kHz the frequencies shown in paragraph (b)(1) of this section are authorized primarily for intership safety communications in the indicated geographic area.

(b) (3)

(3) Except for the frequencies 2093.0 kHz, 2214.0 Khz and 2670.0 kHz the frequencies shown in paragraph (b)(1) of this section may be used on a non-interference basis to safety communications, for operational communications and in the case of commercial transport ships and ships of municipal and state governments, for business communications.

(b) (4)

(4) Ship stations may communicate with government coast stations on 2003.0 kHz about passage of vessels. Interference must not be caused to communications on the St. Lawrence Seaway and on the St. Mary's River.

(b) (5)

(5) Ship stations may use 2670.0 kHz for communications with coast and ship stations of the U.S. Coast Guard. When a ship is not equipped to transmit on 2670.0 kHz or in the band 156-162 MHz the frequency 2003.0 kHz may be used on the Great Lakes for
communications must not cause harmful interference to intership safety, operational and business communications.

(b) (6)

(6) Navigational communications between ships and private coast stations may be exchanged on 2738.0 kHz and 2830.0 kHz. The frequencies 2214.0 kHz, 2738.0 kHz and 2830.0 kHz are assignable to private coast stations upon a showing that they need to communicate with commercial transport or Government ships. Private coast station applicants must show that public coast stations do not provide the required communications and harmful interference will not be caused to the intership use of these frequencies. The transmitter power must not exceed 150 watts. If 2214.0 kHz is authorized for ships, intership communication is also authorized. The geographic limitations to the frequencies 2738.0 kHz and 2830.0 kHz do not prohibit intership communication of less than 320 km (200 statute miles) when only one of the ship stations is within a permitted use geographic area.

(b) (7)

(7) Private aircraft stations may communicate with ship stations on 2738.0 kHz and 2830.0 kHz if:

(b) (7) (i)

(i) The communications are limited to business or operational needs of the vessel while it is engaged in commercial fishing activities in the open sea or adjacent waters;

(b) (7) (ii)

(ii) Harmful interference must not be caused to intership communications;

(b) (7) (iii)

(iii) The maximum output power used for such communication must not exceed 25 watts;

(c)

(c) Frequencies in the 2000-27500 kHz bands for business and operational communications.

(c) (1)

(1) The following simplex frequencies in the 2000-27500 kHz band are available for assignment to private coast stations for business and operational radiotelephone communications. These simplex frequencies also are available for use by authorized ship stations for business and operational radiotelephone communications.

Business and Operational Frequencies in the 2000-27500 kHz Band; Carrier Frequencies (kHz)

2065.0 [FN1,3]	4146	6224	8294	12353	16528	18840	22159	25115
2079.0 [FN1,3]	4149	6227	8297	12356	16531	18843	22162	25118
2096.5 [FN1]	4125 [FN2]	6230	.....	12359	16534	.....	22165	.....
3023.0 [FN4]	4417 [FN5]	6516	.....	.....	.....	.....	22168	.....
	5680 [FN4]	.....	.....	.....	.....	....	22171	.....

[FN1] Limited to peak envelope power of 150 watts.

[FN2] The frequency 4125 kHz is also available for distress and safety, and calling and reply, see s 80.369 (b) and (d) of this part.

[FN3] The frequencies 2065.0 kHz and 2079.0 kHz must be coordinated with Canada.

[FN4] The frequencies 3023.0 kHz and 5680.0 kHz are available to private coast stations licensed to state and local governments and any scene-of-action ships for the purpose of search and rescue scene-of-action coordination including communications with any scene-of-action aircraft.

[FN5] The frequency 6516 kHz is limited to daytime operations. The frequencies 4417 kHz and 6516 kHz are also available for calling and reply, see s 80.369(d) of this part.

(c) (2)

(2) Assignment of these frequencies is subject to the following general limitations:

(c) (2) (i)

(i) These frequencies are shared and are not available for the exclusive use of any station. No more than one frequency from each of the frequency bands will be authorized to a private station without justification;

(c) (2) (ii)

(ii) The emissions must be J3E except that when DSC is used the emission must be F1B or J2B; and

(c) (2) (iii)

(iii) Maximum transmitter output power is limited to 1 kW except as noted.

(d)

(d) Radioprinter frequencies.

(d) (1)

(1) The following table describes the bands available for radioprinter simplex communications between ship and private coast stations:

Frequency bands (kHz)	
2107-2170	4750-4850
2194-2495	5060-5450
2505-2850	5730-5950
3155-3400	7300-8100
4438-4650	.....

(d) (2)

(2) Ship stations may conduct radioprinter communications with private coast stations on frequencies within these bands which are assigned to their associated private coast stations;

(d) (3)

(3) Any alphanumeric code may be used; and

(d) (4)

(4) The bandwidth of radioprinter communications on frequencies within these bands must not exceed 300 Hz.

(e)

(e) Frequencies in the 2000-27500 kHz band for medical advisory communications.

(e) (1)

(1) Private coast stations may be authorized to use any frequencies within the 2030-27500 kHz band that are allocated to Government and non-Government fixed or fixed and mobile radio services shown in the Commission's Table of Frequency Allocations contained in s 2.106 of this chapter for communications with ship

stations to provide medical treatment information or advice. Assignment of these frequencies is subject to the following limitations:

(e) (2)

(2) No protection is provided from harmful interference caused by foreign stations; and

(e) (3)

(3) A private coast station must cease operations on a frequency that causes harmful interference to a foreign station.

(f)

(f) Frequencies in the 156-162 MHz band. The following tables describe the carrier frequencies available in the 156-162 MHz band for radiotelephone communications between ship and private coast stations. (NOTE: the letter "A" following the channel designator indicates simplex operation on a channel designated internationally as a duplex channel.)

Frequencies in the 156-162 MHz band

Channel designator	Carrier frequency (MHz)		Points of communication (Intership and between coast and ship unless otherwise indicated)
	Ship transmit	Coast transmit	
Port Operations			
01A [FN1]	156.050	156.050	
63A [FN1]	156.175	156.175	
05A [FN2]	156.250	156.250	
65A	156.275	156.275	
66A	156.325	156.325	
12 [FN3]	156.600	156.600	
73	156.675	156.675	
14 [FN3]	156.700	156.700	
74	156.725	156.725	
77 [FN4]	156.875	.....	Intership only.
20A [FN12]	157.000	.....	Intership only.
Navigational (Bridge-to-Bridge) [FN5]			
13 [FN6]	156.650	156.650	
67 [FN7]	156.375	156.375	
Commercial			
01A [FN1]	156.050	156.050	
63A [FN1]	156.175	156.175	
07A	156.350	156.350	
67 [FN7]	156.375	.....	Intership only.
08	156.400	.....	Do.

09	156.450	156.450	
10	156.500	156.500	
11 [FN3]	156.550	156.550	
18A	156.900	156.900	
19A	156.950	156.950	
79A	156.975	156.975	
80A	157.025	157.025	
88A [FN8]	157.425		Intership only.
72 [FN14]	156.625		Internship only.
Digital Selective Calling			
70 [FN15]	156.525	156.525	
Noncommercial			
68 [FN17]	156.425	156.425	
09 [FN16]	156.450	156.450	
69	156.475	156.475	
71	156.575	156.575	
72	156.625		Intership only.
78A	156.925	156.925	
79A	156.975	156.975	Great Lakes only.
80A	157.025	157.025	Do.
67 [FN14]	156.375		Internship only.
Distress, Safety and Calling			
16	156.800	156.800	EPRIB
Intership Safety			
06	156.300		a. Intership, or b. For SAR: Ship and aircraft for the U.S. Coast Guard.
Environmental			
15 [FN13]		156.750	Coast to ship only.
Maritime Control			
17 [FN9], [FN10]	156.850	156.850	
Liaison, U.S. Coast Guard			
22A [FN11]	157.100	157.100	Ship, aircraft, and coast stations of the U.S. Coast Guard and at Lake Mead, Nev., ship and coast stations of the National Park Service, U.S. Department of the Interior.

FN1 156.050 MHz and 156.175 MHz are available for port operations and commercial communications purposes when used only within the U.S. Coast Guard designated Vessel Traffic Services (VTS) area of New Orleans, on the lower Mississippi River from the various pass entrances in the Gulf of Mexico to Devil's Swamp Light at River Mile 242.4 above head of passes near Baton Rouge.

FN2 156.250 MHz is available for port operations communications use only within the U.S. Coast Guard designated VTS radio protection areas of New Orleans and Houston described in s 80.383.

FN3 156.550 MHz, 156.600 MHz and 156.700 MHz are available in the U.S. Coast Guard designated port areas only for VTS communications and in the Great Lakes available primarily for communications relating to the movement of ships in sectors designated by the St. Lawrence Seaway Development Corporation or the U.S. Coast Guard. The use of these frequencies outside VTS and ship movement sector protected areas is permitted provided they cause no interference to VTS and ship movement communications in their respective designated sectors.

FN4 Use of 156.875 MHz is limited to communications with pilots regarding the movement and docking of ships. Normal output power must not exceed 1 watt.

FN5 156.375 MHz and 156.650 MHz are available primarily for intership navigational communications. These frequencies are available between coast and ship on a secondary basis when used on or in the vicinity of locks or drawbridges. Normal output power must not exceed 1 watt. Maximum output power must not exceed 10 watts for coast stations or 25 watts for ship stations.

FN6 On the Great Lakes, in addition to bridge-to-bridge communications, 156.650 MHz is available for vessel control purposes in established vessel traffic systems. 156.650 MHz is not available for use in the Mississippi River from South Pass Lighted Whistle Buoy "2" and Southwest Pass entrance Midchannel Lighted Whistle Buoy to mile 242.4 above Head of Passes near Baton Rouge. Additionally it is not available for use in the Mississippi River-Gulf Outlet, the Mississippi River-Gulf Outlet Canal, and the Inner Harbor Navigational Canal, except to aid the transition from these areas.

FN7 Use of 156.375 MHz is available for navigational communications only in the Mississippi River from South Pass Lighted Whistle Buoy "2" and Southwest Pass entrance Mid-channel Lighted Whistle Buoy to mile 242.4 above head of Passes near Baton Rouge, and in addition over the full length of the Mississippi River-Gulf Outlet Canal from entrance to its junction with the Inner Harbor Navigation Canal, and over the full length of the Inner Harbor Navigation Canal from its junction with the Mississippi River to its entry to Lake Pontchartrain at the New Seabrook vehicular bridge.

FN8 Within 120 km (75 miles) of the United States/Canada border, in the area of the Puget Sound and the Strait of Juan de Fuca and its approaches, 157.425 MHz is half of the duplex pair designated as Channel 88. In this area, Channel 88 is available to ship stations for communications with public coast stations only. More than 120 km (75 miles) from the United States/Canada border in the area of the Puget Sound and the Strait of Juan de Fuca, its approaches, the Great Lakes, and the St. Lawrence Seaway, 157.425 MHz is available for intership and commercial communications. Outside Puget Sound area and its approaches and the Great Lakes, 157.425 MHz is also available for communications between commercial fishing vessels and associated aircraft while engaged in commercial fishing activities.

FN9 When the frequency 156.850 MHz is authorized, it may be used additionally for search and rescue training exercises conducted by state or local governments.

FN10 The frequency 156.850 MHz is additionally available to coast stations on the Great Lakes for transmission of scheduled Coded Marine Weather Forecasts (MAFOR), Great Lakes Weather Broadcast (LAWEB) and unscheduled Notices to Mariners or Bulletins. F3C and J3C emissions are permitted. Coast Stations on the Great Lakes must cease weather broadcasts which cause interference to stations operating on 156.800 MHz until the interference problem is resolved.

FN11 The frequency 157.100 MHz is authorized for search and rescue training exercises by state or local government in conjunction with U.S. Coast Guard stations. Prior U.S. Coast Guard approval is required. Use must cease immediately on U.S. Coast Guard request.

FN12 The duplex pair for channel 20 (157.000/161.600 MHz) may be used for ship to coast station communications.

FN13 Available for assignment to coast stations, the use of which is in accord with an agreed program, for the broadcast of information to ship stations concerning the environmental conditions in which vessels operate, i.e., weather; sea conditions; time signals; notices to mariners; and hazards to navigation.

FN14 Available only in the Puget Sound and the Strait of Juan de Fuca.

FN15 The frequency 156.525 MHz is to be used exclusively for distress, safety and calling using digital selective calling techniques. No other uses are permitted.

FN16 The frequency 156.450 MHz is available for intership, ship and coast general purpose calling by noncommercial vessels, such as recreational boats and private coast stations.

FN17 The frequency 156.425 MHz is assigned by rule to private coast stations in Alaska for facsimile transmissions as well as voice communications.

(g)

(g) On-board communications: This section describes the carrier frequency pairs assignable for on-board mobile radiotelephony communications. The center of the on-board repeater antenna must not be located more than 3 meters (10 feet) above the ship's working deck. These frequencies are available on a shared basis with stations in the Business Radio Service.

Frequencies for On-Board Communications		
Channel	Carrier frequency (MHz)	
	Onboard mobile station	Onboard repeater station [FN1]
1	467.750	457.525
2	467.775	457.550
3	467.800	457.575
4	467.825	457.600

FN1 These frequencies may also be assigned to mobile stations for single frequency simplex operation.

(h)

(h) Repeater frequencies in Alaska. The following frequencies are assignable on a primary basis to public and on a secondary basis to private coast stations in Alaska for maritime repeater operations:

Repeater receive: 157.275 MHz

Repeater transmit: 161.875 MHz

(i)

(i) Frequencies in the 1600-5450 kHz band for private communications in Alaska. The following simplex frequencies are available for assignment to private fixed stations located in the State of Alaska for radiotelephony communications with ship stations. These simplex frequencies are available for use by authorized ship stations for radiotelephony communications with private fixed stations located in the State of Alaska.

Private communications in Alaska Carrier frequencies (kHz)

1619.0	2382.0	2563.0
1622.0	2419.0	2566.0
1643.0	2422.0	2590.0
1646.0	2427.0	2616.0
1649.0	2430.0	3258.0
1652.0	2447.0	[FN1] 3261.0
1705.0	2450.0	4366.0
1709.0	2479.0	4369.0
1712.0	2482.0	4396.0
2003.0	2506.0	4402.0
2006.0	2509.0	4420.0
2115.0	2512.0	4423.0
2118.0	2535.0	[FN2] 5167.5
2379.0	2538.0	

FN1 Ship stations must limit use of 3261.0 kHz to communications over distances which cannot be reached by the use of frequency below 2700 kHz or above 156.000 MHz.

FN2 The frequency 5167.5 kHz is available for emergency communications in Alaska. Peak envelope power of stations operating on this frequency must not exceed 150 watts. When a station in Alaska is authorized to use 5167.5 kHz, such station may also use this frequency for calling and listening for the purpose of establishing communications.

(j)

(j) Frequencies for portable ship stations. VHF frequencies authorized for stations authorized carrier frequencies in the 156.275 MHz to 157.450 MHz and 161.575 MHz to 162.025 MHz bands may also be authorized as marine utility stations. Marine-utility stations on shore must not cause interference to any VHF or coast station, VHF or UHF land mobile base station, or U.S. Government station.

s 80.374 Special provisions for frequencies in the 4000-4063 kHz and the 8100-8195 kHz bands shared with the fixed service.

Until implementation procedures and schedules are determined by a conference of the International Telecommunications Union (ITU), the bands 4000-4063 kHz and 8100-8195 kHz are allocated on a shared primary basis between the fixed service and the maritime mobile service; see s 2.106, note US236, of the Commission's Rules. Frequency assignments in the 4000-4063 kHz and 8100-8195 kHz bands are subject to coordination with government users. Additionally, coast station assignments in the 4000-4063 kHz band deviate from international provisions.

Coast station assignments in the 4000-4063 kHz band are permitted provided that harmful interference is not caused to, and must accept interference from, stations operated by other countries in accordance with the Radio Regulations (see Radio Regulation Nos. 342 and 517).

(a)

(a) Application requirements. Applicants for public coast station frequencies described in this section must submit a substantial showing of need based on the following factors:

(a) (1)

(1) A schedule of each currently licensed 4, 6, and 8 MHz frequency and the expected use of the proposed frequencies;

(a) (2)

(2) For additional frequencies within the same MHz band, a factual showing of the 3 busiest hours of any 4 days within a consecutive 10 day period for each of the 2 months immediately preceding the filing of the application indicating that the applicant has used its currently assigned frequencies within the same MHz band an aggregate average of at least 40% of the 3 busiest hours of each day for exchanging communications; and

(a) (3)

(3) Any other facts that support the need for the proposed assignment, e.g., evidence of radio interference by another station located near enough to render a currently licensed frequency substantially unusable.

(b)

(b) Frequencies in the 4000-4063 kHz band.

(b) (1)

(1) The frequencies in the 4000-4063 kHz bands are available to ship and public coast stations for:

(b) (1) (i)

(i) Supplementary ship-to-shore duplex operations with coast stations assigned the frequencies described in s 80.371(b) of this part;

(b) (1) (ii)

(ii) Intership simplex operations and cross-band operations;

(b) (1) (iii)

(iii) Ship-to-shore or shore-to-ship simplex operations; or

(b) (1) (iv)

(iv) Duplex operations with coast stations assigned in the band 4438-4650 kHz, as described in s 80.373(d) of this part.

(b) (2)

(2) The following table describes the channelization of carrier frequencies in the 4000-4063 kHz band.

Carrier Frequencies (kHz)			
4000	4015	4030	4045
4003	4018	4033	4048
4006	4021	4036	4051
4009	4024	4039	4054
4012	4027	4042	4057

(c)

(c) Frequencies in the 8100-8195 kHz band.

(c) (1)

(1) The frequencies in the 8100-8195 kHz bands are available to ship and public coast stations for:
(c) (1) (i)
(i) Supplementary ship-to-shore duplex operations with coast stations assigned the frequencies described in s 80.371(b) of this part;
(c) (1) (ii)
(ii) Intership simplex operations and cross-band operations; or
(c) (1) (iii)
(iii) Ship-to-shore or shore-to-ship simplex operations.
(c) (2)
(2) The following table describes the channelization of carrier frequencies in the 8100-8195 kHz band.

Carrier Frequencies (kHz)		
8101	8137	8167
8104	8140	8170
8107	8143	8173
8110	8146	8176
8116	8149	8179
8119	8152	8182
8122	8155	8185
8125	8158	8188
8131	8161	8191
8134	8164	.....

s 80.375 Radiodetermination frequencies.

This section describes the carrier frequencies assignable to radiodetermination stations. Only direction finding radar stations will be authorized on land.
(a)
(a) Direction finding frequencies. The carrier frequencies assignable to ship stations for direction finding operations are:

Carrier frequency
~~410 kHz~~
~~500 kHz~~
~~2182 kHz~~
8364 kHz
121.500 MHz
243.000 MHz

(a) (1)
(1) ~~Except in distress the assigned frequency for direction finding is 410 kHz;~~
(a) (2)
(2) ~~Ship stations may use 500 kHz for direction finding exclusively in Regions 1 and 3 outside areas of heavy radio traffic. Use must not interfere with distress urgency and safety signals or calls and replies.~~
(b)
(b) Radiodetermination frequencies for cable-repair ships. Except in Region 1 the channels in the 285-325 kHz band are assignable to ship stations for cable-

repair radiodetermination operations. In Region 1 the channels available for assignment for such operations are limited to the 285-315 kHz band. The conditions of use of these channels are set forth in Subpart X of this part. Channel usage must comply with the following requirements:

(b) (1)

(1) They are not permitted within the territorial waters of a foreign country;

(b) (2)

(2) Their output power must not exceed 15 watts; and

(b) (3)

(3) They must not cause interference to any maritime station in the radionavigation service.

(c)

(c) Radiodetermination frequencies below 500 MHz. The frequencies 154.585 MHz, 159.480 MHz, 160.725 MHz, 160.785 MHz, 454.000 MHz and 459.000 MHz are authorized for offshore radiolocation and associated telecommand operations under a ship station license provided:

(c) (1)

(1) The use of these frequencies is related to the ship's commercial operations;

(c) (2)

(2) The station antenna height does not exceed 6 meters (20 feet) above sea level in a buoy station or 6 meters (20 feet) above the mast of the ship in which it is installed.

(d)

(d) Radiodetermination frequency bands above 2400 MHz.

(d) (1)

(1) The radiodetermination frequency bands assignable to ship and shore stations including ship and shore radar and transponder stations are as follows: 2450-2500 MHz; 2900-3100 MHz; 5460-5650 MHz; 9300-9500 MHz; and 14.00-14.05 GHz.

(d) (2)

(2) Assignment of these bands to ship and coast stations are subject to the following conditions:

(d) (2) (i)

(i) The 2450-2500 MHz band may be used only for radiolocation on the condition that harmful interference must not be caused to the fixed and mobile services. No protection is provided from interference caused by emissions from industrial, scientific, or medical
equipment;

(d) (2) (ii)

(ii) The use of the 2900-3100 MHz, 5470-5650 MHz and 9300-9500 MHz bands for radiolocation must not cause harmful interference to the radionavigation and Government radiolocation services. Additionally, the use of the 2900-3000 MHz band for radiolocation must not cause harmful interference to the Government meteorological aids service.

(d) (2) (iii)

(iii) In the 2920-3100 MHz and 9320-9500 MHz bands the use of fixed-frequency transponders for radionavigation is not permitted;

(d) (2) (iv)

(iv) Non-Government radiolocation stations may be authorized in the 5460-5470 MHz band on the condition that harmful interference shall not be caused to the aeronautical or maritime radionavigation services or to Government radiolocation service;

(d) (2) (v)

(v) The use of the 5460-5650 MHz band for radionavigation is limited to shipborne radar;

(d) (2) (vi)

(vi) The use of the 14.00-14.05 GHz band will be authorized only for test purposes and maritime radionavigation on a secondary basis to the fixed-satellite service; and

(d) (2) (vii)

(vii) Selectable transponders must be authorized under Part 5 of the Commission rules until technical standards for their use are developed.

(d) (3)

(3) In addition to the conditions in (2) of this paragraph ship stations are subject to the following conditions:

(d) (3) (i)

(i) Transponders used for safety purposes will be authorized in the 2900-3100 MHz, 5470-5650 MHz and 9300-9500 MHz bands. Transponders used for non-safety purposes will be confined to the 2930-2950 MHz, 5470-5480 MHz and 9300-9500 MHz subbands only;

(d) (3) (ii)

(ii) In the 2900-2920 MHz and 9300-9320 MHz subbands the use of radars other than those installed prior to January 2, 1976, is not permitted;

(d) (3) (iii)

(iii) In the 2920-3100 MHz and 9320-9500 MHz bands non-selectable transponders will be authorized only for safety purposes;

(d) (3) (iv)

(iv) Non-selectable transponders must not be used to enhance detection of marine craft;

(d) (4)

(4) In the 2920-3100 MHz and 9320-9500 MHz bands shore station radar transponders used only as racons will be authorized.

(e)

(e) In addition to the other technical requirements contained in Subpart E of this part search and rescue transponder stations must meet the following technical standards contained in the latest international Radio Consultative Committee (CCIR) Recommendation 628 titled "Technical Characteristics for a Search and Rescue Radar Transponder":

(e) (1)

(1) Operate in the 9300-9500 MHz band;

(e) (2)

(2) Be horizontally polarized at their source;

(e) (3)

(3) Have an effective receiver sensitivity including its antenna gain better than -50 dBm;

(e) (4)

(4) Operate within specifications between the temperatures of -20 and +50 degrees Celsius;

(e) (5)

(5) Operate within specifications for at least 48 hours at 0 degrees Celsius without changing batteries;

(e) (6)

(6) Have a sawtooth sweep with a 5 microseconds +/- 0.5 microseconds rate and return of less than 0.5 microseconds;

(e) (7)

(7) Have a pulse emission of 100 microseconds maximum duration;

(e) (8)

(8) Have a recovery time following excitation of 10 microseconds or less;

(e) (9)

(9) Have a delay between receipt of a radar signal and start of transmissions of 1.25 microseconds or less;

(e) (10)

(10) Have an antenna whose vertical beamwidth is no less than 25 degrees and its azimuthal beamwidth is omnidirectional within 2 dB; and

(e) (11)

(11) Suppress interference caused by the interrogating radar antenna's sidelobes.

s 80.377 Frequencies for ship earth stations.

The frequency band 1626.5-1645.5 MHz is assignable for communication, radiodetermination and telecommand messages, and developmental operations that are associated with the position, orientation and operational functions of maritime satellite equipment. The frequency band 1645.5-1646.5 MHz is reserved for use in the Global Maritime Distress and Safety System (GMDSS).

s 80.379 Maritime frequencies assignable to aircraft stations.

This section describes the maritime frequencies assignable to aircraft stations for simplex operations:

(a)

(a) Available frequencies:

Carrier frequency	Conditions of use
2738 kHz	(1)
2830 kHz	(1)
3023 kHz	(2)
4125 kHz	(3)
5680 kHz	(2)
121.500 MHz	(4)
123.100 MHz	(4)
156.300 MHz	(5)
156.375 MHz	(5)
156.400 MHz	(5)
156.425 MHz	(5)
156.450 MHz	(5)
156.625 MHz	(5)
156.800 MHz	(5)
156.900 MHz	(5)
157.100 MHz	(6)
157.425 MHz	(5)(7)

(b)

(b) The conditions of use of the carrier frequencies in paragraph (a) of this section, are:

(b) (1)

(1) For permissible geographic areas of operation see s 80.373(b)(1). For other limitations see s 80.373(b)(7);

(b) (2)
(2) Aircraft and ship stations may use 3023.0 kHz and 5680.0 kHz for search and rescue scene-of-action coordination including communications between these stations and participating land stations. Stations using these frequencies must use J3E emission;
(b) (3)
(3) Assignable for distress and safety communications between aircraft and maritime mobile stations;
(b) (4)
(4) Assignable for search and rescue between ships and aircraft. Stations using these frequencies must use A3E emission;
(b) (5)
(5) These frequencies may be used by aircraft stations when:
(b) (5) (i)
(i) The altitude of aircraft stations does not exceed 300 meters (1,000 feet), except for reconnaissance aircraft participating in icebreaking operations where an altitude of 450 meters (1,500 feet) is allowed;
(b) (5) (ii)
(ii) The mean power of aircraft stations must not exceed five watts;
(b) (5) (iii)
(iii) Communications are limited to operations in which the maritime mobile stations are primarily involved and where direct communications between the aircraft and the ship or coast station is required;
(b) (5) (iv)

(iv) Stations may use 156.300 MHz for safety purposes only;
(b) (5) (v)
(v) Stations may use 156.800 MHz for distress, safety and calling only; and
(b) (5) (vi)
(vi) Use of 156.375 MHz by aircraft is not permitted in the New Orleans VTS area specified in s 80.383.
(b) (6)
(6) The use of 157.100 MHz is limited to communications with stations of the Department of Interior at Lake Mead, Nevada; and
(b) (7)
(7) Commercial fishing vessels and associated aircraft may use 157.425 MHz while engaged in commercial fishing activities except within 120 km (75 miles) of the United States/Canada border and Puget Sound and the Strait of Juan de Fuca and its approaches, the Great Lakes, and the St. Lawrence Seaway.

s 80.381 Frequencies for operational fixed stations.

The following carrier frequencies in the 72-76 MHz band are assignable to operational fixed stations using vertical polarization, if no harmful interference is caused to TV reception on Channels 4 and 5. These frequencies are shared with the Land Mobile and Aviation Radio Services.

OPERATIONAL FIXED FREQUENCIES IN THE 72-76 MHz BAND
CARRIER FREQUENCY IN MHz

72.02	72.28	72.64	72.90	75.68	75.94
72.04	72.30	72.66	72.92	75.70	75.96
72.06	72.32	72.68	72.94	75.72	75.98

72.08	72.34	72.70	72.96	75.74	.....
72.10	72.36	72.72	72.98	75.76	.....
72.12	72.38	72.74	75.42	75.78	.....
72.14	72.40	72.76	75.46	75.80	.....
72.16	72.42	72.78	75.50	75.82	.....
72.18	72.46	72.80	75.54	75.84	.....
72.20	72.50	72.82	75.58	75.86	.....
72.22	72.54	72.84	75.62	75.88	.....
72.24	72.58	72.86	75.64	75.90	.....
72.26	72.62	72.88	75.66	75.92	.....

s 80.383 Vessel Traffic Services (VTS) system frequencies.

This section describes the carrier frequencies available for use in the Coast Guard Vessel Traffic Services (VTS) systems within the designated geographic radio protected areas.

(a)

(a) Assigned frequencies:

Vessel Traffic Control Frequencies

Carrier frequencies (MHz)	Geographic areas
156.250	Seattle.
156.550	New York, New Orleans, Houston, Prince William Sound, [FN2] Berwick Bay.
156.600	New York, New Orleans, Houston, San Francisco, [FN2] Sault Ste. Marie. [FN2]
156.700	New York, New Orleans, Seattle, San Francisco. [FN1]

FN1 Private coast station licenses for the use of this frequency will not be renewed beyond November 1, 1997. Continued use until expiration must be on a noninterference basis to Coast Guard VTS communications.

FN2 Private coast station licenses for the use of this frequency in this area will expire at the end of the current license term or five years after the adopted date of the final rule, whichever comes first. Continued use until expiration must be on a noninterference basis to Coast Guard VTS communications.

(b)

(b) The U.S. Coast Guard designated radio protection areas for VTS are as follows:

(b) (1)

(1) New York. The rectangle between north latitudes 40 degrees and 42 degrees and west longitudes 71 degrees and 74 degrees 30 minutes;

(b) (2)

(2) New Orleans: The rectangle between North latitudes 27 degrees 30 minutes and 31 degrees 30 minutes and West longitudes 87 degrees 30 minutes and 93 degrees;

(b) (3)

(3) Houston. The rectangle between north latitudes 28 degrees 30 minutes and 30 degrees 20 minutes and west longitudes 93 degrees 30 minutes and 96 degrees;

(b) (4)

(4) Seattle (Puget Sound). The area encompassed between the United States-Canadian border and a line drawn from 49 degrees North 121 degrees West on the United States-Canadian Border, to 46 degrees 30 minutes North 121 degrees West, then to 46 degrees 30 minutes North 125 degrees West, then to 48 degrees 30 minutes North 125 degrees West, and then east to the United States-Canadian Border;

(b) (5)

(5) San Francisco. The rectangle between north latitudes 39 degrees and 37 degrees and west longitudes 120 degrees 50 minutes and 123 degrees 20 minutes; and

(b) (6)

(6) Prince William Sound. The rectangle between North latitudes 61 degrees 17 minutes and 59 degrees 22 minutes and West longitudes 149 degrees 39 minutes and 145 degrees 36 minutes.

(b) (7)

(7) Sault Ste. Marie. The rectangle between North latitudes 45 degrees and 47 degrees, and West longitudes 83 degrees and 85 degrees.

(b) (8)

(8) Berwick Bay. The rectangle between North latitudes 28 degrees 30 minutes and 30 degrees 30 minutes, and West longitudes 90 degrees 50 minutes and 92 degrees.

(c)

(c) The use of the frequencies shown in paragraph (a) of this section is permitted in areas outside the Coast Guard radio protection areas provided there is no interference to VTS communications within the VTS areas.

s 80.385 Frequencies for automated systems.

This section describes the carrier frequencies for the Automated Maritime Telecommunications System (AMTS) and for other automated multi-station systems.

(a)

(a) Automated Maritime Telecommunications System (AMTS).

(a) (1)

(1) The Automated Maritime Telecommunications System (AMTS) is an integrated and interconnected maritime communications system.

(a) (2)

(2) The following carrier frequency pairs are available for radiotelephony, facsimile and teleprinter communications. AMTS operations must not cause harmful interference to the U.S. Navy SPASUR system which operates in the band 216.880-217.080 MHz.

Channel No.	Carrier frequency (MHz)		
	Ship transmit [FN1]	Coast transmit [FN2]	Group
101	.....	216.0125	D
102	.....	216.0375	
103	.....	216.0625	
104	.....	216.0875	
105	.....	216.1125	
106	.....	216.1375	

107		216.1625	
108		216.1875	
109		216.2125	
110		216.2375	
111		216.2625	
112		216.2875	
113		216.3125	
114		216.3375	
115		216.3625	
116		216.3875	
117		216.4125	
118		216.4375	
119		216.4625	
120		216.4875	
121		216.5125	C
122		216.5375	
123		216.5625	
124		216.5875	
125		216.6125	
126		216.6375	
127		216.6625	
128		216.6875	
129		216.7125	
130		216.7375	
131		216.7625	
132		216.7875	
133		216.8125	
134		216.8375	
135		216.8625	
136		216.8875	
137		216.9125	
138		216.9375	
139		216.9625	
140		216.9875	
141	219.0125	217.0125	B
142	219.0375	217.0375	
143	219.0625	217.0625	
144	219.0875	217.0875	
145	219.1125	217.1125	
146	219.1375	217.1375	
147	219.1625	217.1625	
148	219.1875	217.1875	
149	219.2125	217.2125	
150	219.2375	217.2375	
151	219.2625	217.2625	
152	219.2875	217.2875	
153	219.3125	217.3125	
154	219.3375	217.3375	
155	219.3625	217.3625	
156	219.3875	217.3875	
157	219.4125	217.4125	
158	219.4375	217.4375	
159	219.4625	217.4625	
160	219.4875	217.4875	

161.....	219.5125	217.5125	A
162.....	219.5375	217.5375	
163.....	219.5625	217.5625	
164.....	219.5875	217.5875	
165.....	219.6125	217.6125	
166.....	219.6375	217.6375	
167.....	219.6625	217.6625	
168.....	219.6875	217.6875	
169.....	219.7125	217.7125	
170.....	219.7375	217.7375	
171.....	219.7625	217.7625	
172.....	219.7875	217.7875	
173.....	219.8125	217.8125	
174.....	219.8375	217.8375	
175.....	219.8625	217.8625	
176.....	219.8875	217.8875	
177.....	219.9125	217.9125	
178.....	219.9375	217.9375	
179.....	219.9625	217.9625	
180.....	219.9875	217.9875	

FN1 Ship transmit frequencies in Group C and D are not authorized for AMTS use.
FN2 Coast station operation on frequencies in Groups C and D are not currently assignable and are shared on a secondary basis with the Low Power Radio Service in part 95 of this chapter. Frequencies in the band 216.750-217.000 MHz band are available for low power point-to-point network control communications by AMTS coast stations under the Low Power Radio Service (LPRS). LPRS operations are subject to the conditions that no harmful interference is caused to the United States Navy's SPASUR radar system (216.88-217.08 MHz) or to TV reception within the Grade B contour of any TV channel 13 station or within the 68 dBu predicted contour of any low power TV or TV translator station operating on channel 13.

(a) (3)

(3) Channels in the 219-220 MHz band are also used on a secondary, non-interference basis by amateur stations participating in digital message forwarding systems. Amateur stations may not cause harmful interference to AMTS operations and must accept any harmful interference from AMTS operation. Amateur stations within 80 km (50 miles) of an AMTS coast station must obtain written approval from the AMTS licensee prior to operating in the 219-220 MHz band. Amateur stations within 640 km (398 miles) of an AMTS coast station must notify the AMTS licensee in writing at least 30 days prior to initiation of operations in the 219-220 MHz band.

All amateur stations must notify the American Radio Relay League in writing at least 30 days prior to initiation of operations in the 219-220 MHz band (ARRL, 225 Main St., Newington, CT 06111- 1494).

(b)

(b) Narrowband operations in AMTS. AMTS licensees may operate on frequencies offset from the assignable channels specified in paragraph (a)(2) of this section provided such licensees are also licensed for channels on each side of the offset frequency. Licensees using offset frequencies must conform with all other conditions of operation.

(c)

(c) Automated multi-station system. Great Lakes Region. The following table describes the assignable carrier frequency pairs to provide communication services including automated calling, teleprinter and facsimile:

Channel designator	Carrier frequency (MHz)	
	Ship transmit	Coast transmit
17	None	[FN1]156.850
84	157.225	161.825
85	157.275	161.875
86	157.325	161.925
87	157.375	161.975

FN1 The frequency 156.850 MHz is used only to transmit scheduled weather broadcasts.

s 80.387 Frequencies for Alaska fixed stations.

(a)

(a) The carrier frequencies listed in (b) of this section are assignable for point-to-point simplex radiotelephone communications between private fixed stations in Alaska. The frequency pairs listed in paragraph (d) of this section are assignable for point-to-point duplex radiotelephone communications between private and public fixed stations in Alaska. Fixed stations in Alaska authorized to share carrier frequencies with the maritime mobile service must always give priority on such frequencies to maritime distress, urgency and safety communications.

(b)

(b) Alaska-private fixed station frequencies:

Carrier frequencies (kHz)		
1643.0	2430.0	2773.0
1646.0	2447.0	3164.5
1649.0	2450.0	3183.0
1652.0	2463.0	3196.0
1657.0	2466.0	3201.0
1660.0 [FN1]	2471.0	3258.0
1705.0	2479.0	3261.0
1709.0	2482.0	3303.0
1712.0	2506.0	3365.0
2003.0	2509.0	4035.0
2006.0	2512.0	5164.5
2115.0	2535.0	[FN3] 5167.5
2118.0	2538.0	5204.5
2253.0	2563.0	[FN2] 6948.5
2400.0	2566.0	[FN2] 7368.5
2419.0	2601.0	8067.0
2422.0	2616.0	8070.0
2427.0	2691.0	[FN2] 11437.0
.....	.....	[FN2] 11601.5

FN1 Use of 1660.0 kHz must be coordinated to protect radiolocation on adjacent channels.

FN2 Peak envelope power must not exceed 1 kW for radiotelephony. Teleprinter use is authorized.
FN3 The frequency 5167.5 kHz is available for emergency communications in Alaska. Peak envelope power of stations operating on this frequency must not exceed 150 watts. When a station in Alaska is authorized to use 5167.5 kHz, such station may also use this frequency for calling and listening for the purpose of establishing communications.

(c)
(c) Use of the frequencies in (b) of this section must meet the following conditions:
(c) (1)
(1) Communications between private coast and private fixed stations are prohibited; and
(c) (2)
(2) Station licensees must not charge for third party communication services between their station and any other private fixed station.
(d)

(d) The following carrier frequency pairs are assignable for point-to-point communications between public fixed and private fixed stations:

Public fixed station frequencies (kHz)	Private fixed Station frequencies (kHz)
[FN1]2312.0	2632.0
2604.0	2256.0
2781.0	[FN3]2474.0
2784.0	2694.0
3167.5	3354.0
3180.0	2776.0
3241.0	3357.0
3362.0	3238.0
[FN2]4791.5	5207.5
5370.0	[FN4]5134.5, [FN4]5137.5

FN1 This frequency is assignable on a primary basis to public coast stations and on a secondary basis to public fixed stations.
FN2 Teleprinter use is authorized.
FN3 Peak envelope power must not exceed 1 kW.
FN4 Licensees must cease all communications on 5134.5 kHz and 5137.5 kHz when notified by the State of Alaska of an emergency or disaster. Licensees may resume communication on these frequencies when notified by the State of Alaska that the disaster or harmful interference has ended.

(e)
(e) The public fixed station frequencies are assignable to common carriers.
(f)
(f) The private fixed station frequencies described in paragraph (d) of this section are assignable to private entities located in areas where common carrier facilities are not available. Private fixed stations operating on the frequencies in paragraph (d) must communicate with public fixed stations only. Private fixed stations are permitted to provide third party communications between their station and the public fixed stations. A charge for such service is prohibited.

(g)
(g) U.S. Government frequencies will be authorized if the Commission determines that the assignment is in the public interest.

s 80.389 Frequencies for maritime support stations.

(a)
(a) Marine receiver test. Maritime support stations will be authorized to conduct receiver tests on the ship station frequencies of the channels assigned to the associated public coast station.
(b)
(b) Shore radar and radiolocation tests. The following frequency bands are available for assignment to demonstrate radar and radiolocation equipment. The use of frequencies within these bands must not cause harmful interference to the radionavigation service and the Government radiolocation service: 2450- 2500 MHz, 2900-3100 MHz, 5460-5650 MHz, 9300-9500 MHz, 14.0-14.05 GHz.

s 80.391 Frequencies for developmental stations.

(a)
(a) Ship and shore stations engaged in developmental operations may be assigned any frequency or frequencies assignable to the service and class of station they propose to operate. The following frequency bands are also assignable to ships and coast stations for developmental operations:

Ship transmit	Coast transmit
5350-5460 MHz [FN1]	5350-5460 MHz [FN1]
6425-6525 MHz	
9000-9200 MHz [FN1]	9000-9200 MHz [FN1]
11700-12200 MHz	11700-12200 MHz
17700-19700 MHz	
27500-29500 MHz	

FN1 The bands 5350-5460 MHz and 9000-9200 MHz are assignable for developmental operations at ship and shore radiolocation stations if their operations do not cause harmful interference to aeronautical radionavigation or Government radiolocation services.

(b)
(b) Stations authorized to conduct developmental operations are prohibited from communicating with any station of a country other than the United States.
(c)
(c) Stations authorized to conduct developmental operations must not cause harmful interference to the operation of stations authorized in other public services nor to any United States Government or foreign station.

s 80.401 Station documents requirement.

Licensees of radio stations are required to have current station documents as indicated in the following table:

<Not available>

Notes:

1. The expired station license must be retained in the station records until the first Commission inspection after the expiration date.

2. Alternatively, a list of coast stations maintained by the licensee with which communications are likely to be conducted, showing watchkeeping hours, frequencies and charges, is authorized.

3. Required only if station provides a service to oceangoing vessels.

4. Certification of a Great Lakes Agreement inspection may be made by either a log entry or issuance of a Great Lakes Agreement certificate. Radiotelephone logs containing entries certifying that a Great Lakes Agreement inspection has been conducted must be retained and be available for inspection by the FCC for 2 years after the date of the inspection.

s 80.403 Availability of documents.

Station documents must be readily available to the licensed operator(s) on duty during the hours of service of the station and to authorized Commission employees upon request.

s 80.405 Station license.

(a)
(a) Requirement. Stations must have an authorization granted by the Federal Communications Commission.
(b)
(b) Application. Application for authorizations in the maritime services must be submitted on the prescribed forms in accordance with Subpart B of this part.
(c)
(c) Posting. The current station authorization or a clearly legible copy must be posted at the principal control point of each station. If a copy is posted, it must indicate the location of the original. When the station license cannot be posted as in the case of a marine utility station operating at temporary unspecified locations or the ship or recreational boat does not have an enclosed wheelhouse, it must be kept where it will be readily available for inspection. The licensee of a station on board a ship subject to Parts II or III of Title III of the Communications Act or the Safety Convention must retain the most recently expired ship station license in the station records until the first Commission inspection after the expiration date.

s 80.407 Operator authorization.

This section contains information and rules pertinent to the application for and posting of radio operator authorizations. Rules applicable to radio operator requirements are contained in Subpart D of this part and other rules pertinent to commercial radio operators are contained in Part 13 of this chapter.

(a)

(a) Application. Detailed information about application forms, filing procedures, and places to file applications for radio operator authorizations is contained in the bulletin "Commercial Radio Operator Licenses and Permits." This bulletin is available from any Commission District Office or from the FCC, Washington, DC 20554.

(b)

(b) Posting. When a Commission-authorized operator is required, the original authorization of each operator must be posted at the principal control point of the station. In lieu of posting, an operator who holds a restricted radiotelephone operator permit or a higher class operator license may have the operator authorization or a photocopy thereof available for inspection upon request by authorized Commission employees when operating the following:

(b) (1)

(1) A voluntary station;

(b) (2)

(2) Any class of ship station when the operator is on board solely to service the radio equipment; or

(b) (3)

(3) A portable station.

s 80.409 Station logs.

(a)

(a) General requirements. Logs must be established and properly maintained as follows:

(a) (1)

(1) The log must be kept in an orderly manner. The required information for the particular class or category of station must be readily available. Key letters or abbreviations may be used if their proper meaning or explanation is contained elsewhere in the same log.

(a) (2)

(2) Erasures, obliterations or willful destruction within the retention period are prohibited. Corrections may be made only by the person originating the entry by striking out the error, initialing the correction and indicating the date of correction.

(a) (3)

(3) Ship station logs must identify the vessel name, country of registry, and official number of the vessel.

(a) (4)

(4) The station licensee and the radio operator in charge of the station are responsible for the maintenance of station logs.

(b)

(b) Availability and retention. Station logs must be made available to authorized Commission employees upon request and retained as follows:

(b) (1)

(1) Logs must be retained by the licensee for a period of two years from the date of entry, and, when applicable, for such additional periods as required by the following paragraphs:

(b) (1) (i)

(i) Logs relating to a distress situation or disaster must be retained for three years from the date of entry.

(b) (1) (ii)

(ii) If the Commission has notified the licensee of an investigation, the related logs must be retained until the licensee is specifically authorized in writing to destroy them.

(b) (1) (iii)

(iii) Logs relating to any claim or complaint of which the station licensee has notice must be retained until the claim or complaint has been satisfied or barred by statute limiting the time for filing suits upon such claims.

(b) (2)

(2) Logs containing entries required by paragraphs (e) and (f) of this section must be kept at the principal radiotelephone operating location while the vessel is being navigated. All entries in their original form must be retained on board the vessel for at least 30 days from the date of entry. Additionally, logs required by paragraph (f) of this section must be retained on board the vessel for a period of 2 years from the date of the last inspection of the ship radio station.

(b) (3)

~~(3) Ship radiotelegraph logs must be kept in the principal radiotelegraph operating room during the voyage~~.

(c)

(c) Public coast station logs. Public coast stations must maintain a log as follows:

(c) (1)

(1) "ON DUTY" must be entered by the operator beginning a duty period, followed by the operator's signature. "OFF DUTY" must be entered by the operator being relieved of or terminating duty, followed by the operator's signature.

(c) (2)

(2) The date and time of making an entry must be shown opposite the entry.

(c) (3)

(3) Failure of equipment to operate as required and incidents tending to unduly delay communication must be entered.

(c) (4)

(4) All measurements of the transmitter frequency(ies) must be entered with a statement of any corrective action taken.

(c) (5)

(5) Entries must be made giving details of all work performed which may affect the proper operation of the station. The entry must be made, signed and dated by the operator who supervised or performed the work and, unless the operator is regularly employed on a full-time basis at the station, must also include the mailing address, class, serial number, and expiration date of the operator license.

(c) (6)

(6) Entries must be made about the operation of the antenna tower lights when the radio station has an antenna structure requiring illumination by Part 17 of this chapter.

(c) (7)

(7) All distress or safety related calls transmitted or received must be entered, together with the frequency used and the position of any vessel in need of assistance.

(c) (8)

(8) Coast stations which maintain a watch on 500 kHz must enter the time this watch is begun, suspended or ended.

(d)

(d) ~~Ship radiotelegraph logs. Logs of ship stations which are compulsorily equipped for radiotelegraphy and operating in the band 90 to 535 kHz must contain log entries as follows~~:

(d) (1)

(1) T~~he date and time of each occurrence or incident required to be entered in the log must be shown opposite the entry and the time must be expressed in Coordinated Universal Time~~ (UTC).

(d) (2)

~~(2) "ON WATCH" must be entered by the operator beginning a watch, followed by the operator's signature. "OFF WATCH" must be entered by the operator being relieved or terminating a watch, followed by the operator's signature. All log entries must be completed by the end of each watch~~.

(d) (3)

(3) ~~During the watch, all calls and replies to and from the station must be entered to include the time, frequencies, and call letters of the station communicated with or heard. Also, any messages exchanged must be entered to include the time, frequency, and call letters of the station(s) communicated with or heard.~~

(d) (4)

~~(4) During the watch, an entry must be made twice per hour stating whether the international silence period was observed. Entries must also be made indicating any signals or communications heard on 500 kilohertz during this period. If no signals are heard on 500 kHz, an entry to that effect must be made~~.

(d) (5)

~~(5) The time and reason for discontinuance and the time of resuming the watch must be entered when the 500 kHz watch is discontinued.~~

(d) (6)

~~(6) All distress calls, automatic alarm signals, urgency and safety signals made or intercepted, the complete , if possible, or distress messages and distress communications, and any incidents or occurrences which may appear to be of importance to safety of life or property at sea, must be entered, together with the time of such observation or occurrence and the position of the ship or other mobile unit in need of assistance~~.

(d) (7)

~~(7) The position of the ship at least once per day~~.

(d) (8)

~~(8) A daily entry must be made comparing the radio station clock with standard time, including errors observed and corrections made. For this purpose, authentic radio time signals received from land or fixed stations will be acceptable as standard time~~.

(d) (9)

~~(9) All test transmissions must be entered, including the time of the transmissions and the approximate geographical location of the vessel~~.

(d) (10)

(10~~) Any failure of equipment to operate as required and any incidents tending to unduly delay communications must be enter~~ed.

(d) (11)

(1~~1) A ship required to keep a radiotelegraph watch on 500 kHz must meet the following:~~

(d) (11) (i)